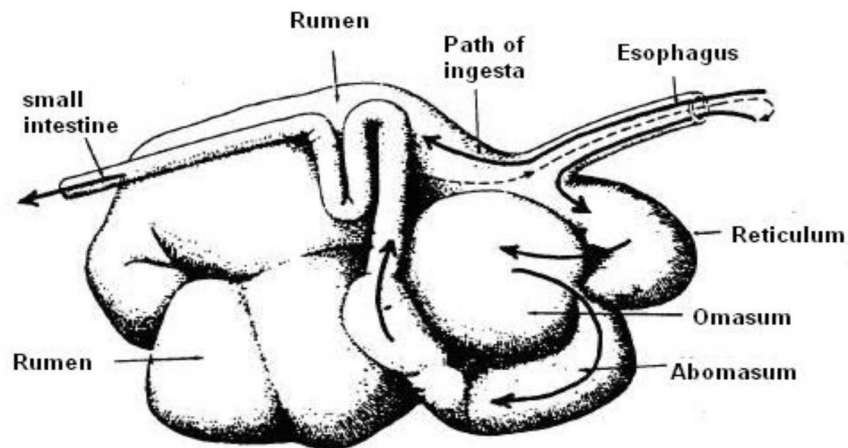


## CHAPTER 2: LITERATURE REVIEW

### 2.1 THE RUMINANT STOMACH

The ruminant stomach is subdivided into four compartments based on the feeding habits of ruminants (Hofmann, 1973). The subdivisions give rise to the four stomach sacs consisting of the rumen, reticulum, omasum and abomasums. These subdivisions are intended to delay passage of food through the gut (Hofmann, 1973). The rumen and reticulum are commonly used for food. Sometimes the ruminant stomachs, together with the intestines are collectively referred to as tripe.

The rumen extends from the diaphragm to the pelvis of the ruminant (Frandsen and Spurgeon, 1992). This is shown in Fig. 2.1. The rumen is the first stomach. Its lining varies in thickness and is often associated with a layer of fat. The rumen also contains numerous aerobic and anaerobic bacteria that aid in the fermentation of feed (Hungate, 1966).



**Figure 2.1: The four compartments of the ruminant stomach (Jurgens, 1996)**

The reticulum, also known as honeycomb tripe, precedes the rumen and lies next to the heart (Hungate, 1966). Although it is a small sac, it has a large opening that leads to the rumen, a much larger compartment. The *rumino-reticular* fold separates the reticulum